Curriculum Vitae: Dr. Sebastian Bohm

Contact information

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Department of Training and Movement Sciences (DTMS)
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Education and scientific qualification

Since 2018 Head of the research group „*Muscle-tendon interaction and mechanics"* at DTMS
Since 2015 Post-doc at DTMS, Humboldt-Universität zu Berlin
2011-2015 PhD in biomechanics/training and movement sciences at Humboldt-Universität zu Berlin
Graduate school member *Berlin School of Movement Sciences*
Since 2011 Research fellow in the DTMS
2004-2011 Diploma in sport science at Humboldt-Universität zu Berlin

Membership

Ongoing German society of biomechanics, European Society of Biomechanics, European College of Sport Science

Research funding

Since 2022 Current research project: "Perturbation of human locomotion" German research foundation (DFG 513866416), 213.600€
2017-2023 Internal competitive university fund for research equipment: 155.000€
2018 Research equipment, 10.000€, Foundation Oskar-Helene-Heim
2012-16 7 travel grants: German Society of Biomechanics and Berlin School of Movement Sciences

Awards

2021 *YIA*, German Society of Biomechanics, Germany, Co-author
2019 *Best Experimental Study Award,* 11th annual meeting of the German Society of Biomechanics
2015 *VBKI Science Award 2015* of the Association of Berlin Merchants and Industrialists
2015 *Best Experimental Study Award,* 9th annual meeting of the German Society of Biomechanics

Editorial roles

Editor Scientific Reports, Biomechanics and Control of Human Movement/Frontiers in Sports and Active Living
Guest Associate Editor: Frontiers in Physiology, Sensors
Reviewer 20 international journals

Administration/Academic service

Since 2014 *DTMS:* Lab coordinator, supervision PhDs
Institute/faculty: Member at institute council, Faculty budgeting committee member, Teaching and learning committee member, International office at institute of sport science
Teaching: Currently six lectures/seminars per semester

Publication record (Nov. 2023)

Peer-reviewed journal publications: 63 (*Orcid*)

h-Index: 28 (*Google scholar*)

Congress oral presentations: 27 (presenting/first author only)

Book contributions: 16

Selected current publications

1. **Bohm, S.**, Mersmann, F., Schroll, A., Arampatzis, A. (2023): Speed-specific optimal contractile conditions of the human soleus muscle from slow to maximum running speed. Journal of Experimental Biology, https://doi.org/10.1242/jeb.246437.
2. Arampatzis, A., Kharazi, M., Theodorakis, C., Mersmann, F., **Bohm, S.** (2023): Biarticular mechanisms of the gastrocnemii muscles enhance ankle mechanical power and work during running. R. Soc. Open Sci. 10:230007. https://doi.org/10.1098/rsos.230007.
3. Kharazi, M., Theodorakis, C., Mersmann, F., **Bohm, S.**, Arampatzis, A. (2023): Contractile Work of the Soleus and Biarticular Mechanisms of the Gastrocnemii Muscles Increase the Net Ankle Mechanical Work at High Walking Speeds. Biology, 12, 872. https://doi.org/10.3390/biology12060872.
4. **Bohm, S.**, Mersmann, F., Santuz, A., Schroll, A., Arampatzis, A. (2021): Muscle-specific economy of force generation and efficiency of work production during human running. eLife 10:e67182.
5. **Bohm, S.**, Mersmann, F., Santuz, A., Arampatzis, A. (2021): Enthalpy efficiency of the soleus muscle contributes to improvements in running economy. Proc. R. Soc. B 288: 20202784.
6. Kharazi, M., **Bohm, S.**, Theodorakis, C. Mersmann, F., Arampatzis, A. (2021): Quantifying mechanical loading and elastic strain energy of the human Achilles tendon during walking and running. Scientific Reports, 11:5830.
7. **Bohm, S.**, Mersmann, F., Santuz, A., Arampatzis, A. (2019): The force-length-velocity potential of the human soleus muscle is related to the energetic cost of running. Proc. R. Soc. B 286: 20192560.
8. **Bohm, S.**, Mersmann, F., Arampatzis, A. (2019): Functional adaptation of connective tissue by training. German Journal of Sports Medicine, 70, 105-110.
9. **Bohm, S.**, Marzilger, R., Mersmann, F., Santuz, A., Arampatzis, A. (2018): Operating length and velocity of human vastus lateralis muscle during walking and running. Scientific Reports 8:5066.
10. Nikolaidou, M.E., Marzilger, R., **Bohm, S.**, Mersmann, F., Arampatzis, A. (2017): Operating length and velocity of human M. vastus lateralis fascicles during vertical jumping. Royal Society Open Science, 4: 170-185.

Invited talks

2022 27th annual Congress of the European College of Sport Science (Sevilla, Spain): „Muscle-specific economy of force generation and efficiency of work production during human running“, Invited symposium: “The functional integrity of muscle and connective tissue for locomotor performance”.

2021 33th Annual Meeting German society of Geriatrics (online): „Instability and perturbations – a theory-based training approach to improve stability performance in the elderly”, Invited symposium: “Specific training for fall prevention? Assessment and training of the reactive balance control during perturbations”.

2020 Fascia in Movement and Sport - International event on Fascia, Dynamic activities and Sport (online): „Mechanical loading and adaptive responses of tendinous tissues“.